

# Service Manual

Cassette

Stereo Cassette Player

RQ-P303

Color

(K) ..... Black Type



Area

| Country Code | Area                | Color |
|--------------|---------------------|-------|
| (E)          | Continental Europe. | (K)   |
| (EB)         | United Kingdom.     |       |

## ■ RQ-340 MECHANISM SERIES (AR-40P)

### ■ SPECIFICATIONS

|                     |                                                                                                                                                                                                                    |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power Requirement:  | Included Rechargeable Battery; DC 1.2 V<br>Battery; DC 1.5 V (one R6P/LR6, "UM-3" battery)<br>AC; For (E), 220 V, 50 Hz with optional AC adaptor RPAC1Z<br>For (EB), 240 V, 50 Hz with optional AC adaptor RPAC1ZE |
| Power Output:       | 14 mW (7 mW×2)...RMS (max.)                                                                                                                                                                                        |
| Frequency Response: | 30~18,000 Hz (Normal/CrO <sub>2</sub> /METAL)                                                                                                                                                                      |
| Tape Speed:         | 4.8 cm/s                                                                                                                                                                                                           |
| Track System:       | 4-track 2-channel stereo                                                                                                                                                                                           |
| Jacks:              |                                                                                                                                                                                                                    |
| Input;              | DC IN; 1.5 V (mini jack)                                                                                                                                                                                           |
| Output;             | Headphones; 16Ω (Ø3.5)                                                                                                                                                                                             |
| Dimensions:         |                                                                                                                                                                                                                    |
| (W×H×D)             | 71.6×105.5×24 mm                                                                                                                                                                                                   |
| Weight:             | 132 g without rechargeable battery                                                                                                                                                                                 |
| Charger:            | Input; For (E), AC 220 V, 50 Hz, 4 W<br>For (EB), AC 240 V, 50 Hz, 4 W<br>Output; DC 1.2 V, 350 mA                                                                                                                 |

Weights and dimensions shown are approximate.  
Design and specifications are subject to change without notice.

# Panasonic

Matsushita Electric Industrial Co., Ltd.  
Central P.O. Box 288, Osaka 530-91, Japan

# Service Manual

Cassette

Stereo Cassette Player

RQ-P303

Color

(K) ..... Black Type



Area

| Country Code | Area                | Color |
|--------------|---------------------|-------|
| (E)          | Continental Europe. | (K)   |
| (EB)         | United Kingdom.     |       |

## ■ RQ-340 MECHANISM SERIES (AR-40P)

### ■ SPECIFICATIONS

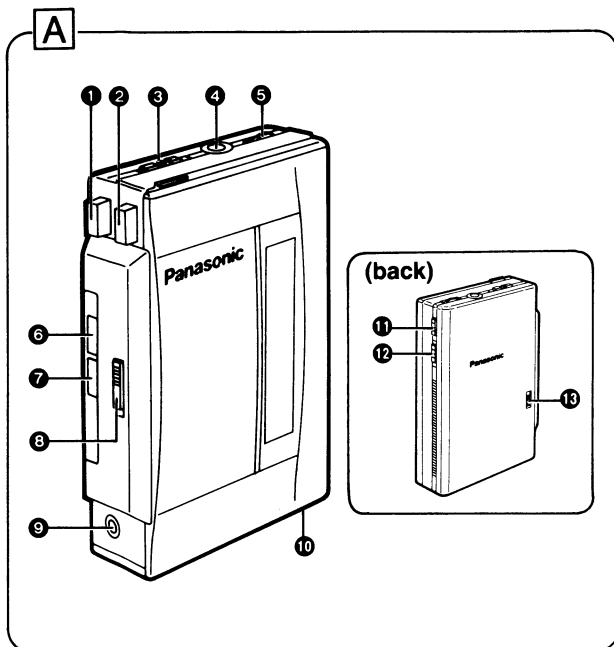
|                     |                                                                                                                                                                                                                    |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power Requirement:  | Included Rechargeable Battery; DC 1.2 V<br>Battery; DC 1.5 V (one R6P/LR6, "UM-3" battery)<br>AC; For (E), 220 V, 50 Hz with optional AC adaptor RPAC1Z<br>For (EB), 240 V, 50 Hz with optional AC adaptor RPAC1ZE |
| Power Output:       | 14 mW (7 mW×2)...RMS (max.)                                                                                                                                                                                        |
| Frequency Response: | 30~18,000 Hz (Normal/CrO <sub>2</sub> /METAL)                                                                                                                                                                      |
| Tape Speed:         | 4.8 cm/s                                                                                                                                                                                                           |
| Track System:       | 4-track 2-channel stereo                                                                                                                                                                                           |
| Jacks:              |                                                                                                                                                                                                                    |
| Input;              | DC IN; 1.5 V (mini jack)                                                                                                                                                                                           |
| Output;             | Headphones; 16Ω (Ø3.5)                                                                                                                                                                                             |
| Dimensions:         |                                                                                                                                                                                                                    |
| (W×H×D)             | 71.6×105.5×24 mm                                                                                                                                                                                                   |
| Weight:             | 132 g without rechargeable battery                                                                                                                                                                                 |
| Charger:            | Input; For (E), AC 220 V, 50 Hz, 4 W<br>For (EB), AC 240 V, 50 Hz, 4 W<br>Output; DC 1.2 V, 350 mA                                                                                                                 |

Weights and dimensions shown are approximate.  
Design and specifications are subject to change without notice.

# Panasonic

**Matsushita Electric Industrial Co., Ltd.**  
Central P.O. Box 288, Osaka 530-91, Japan

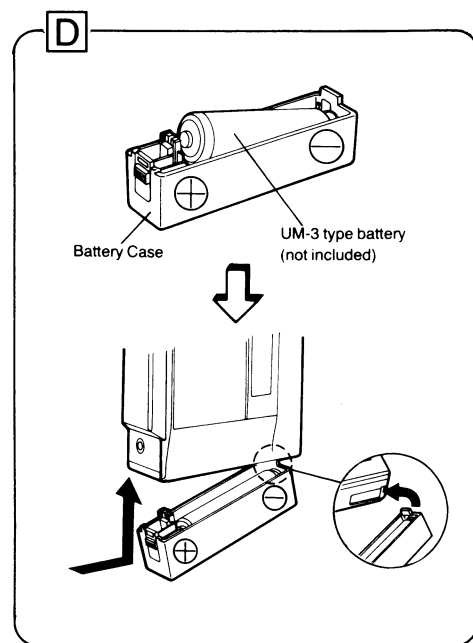
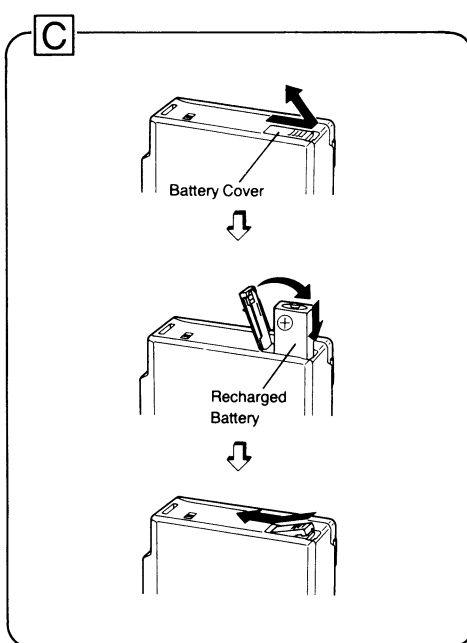
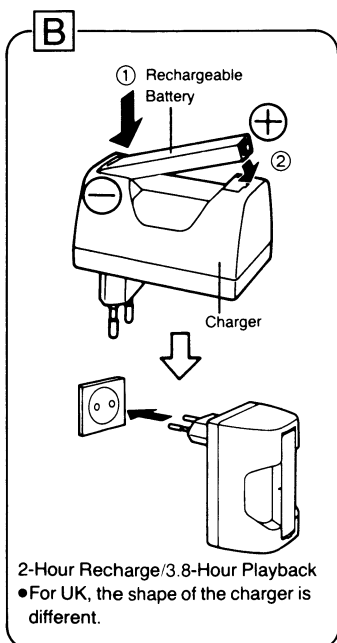
## LOCATION OF CONTROLS



(Refer to [A].)

- ① Playback Button (PLAY)
- ② Stop Button (STOP)
- ③ XBS (Extra Bass System) Selector (XBS)
- ④ Headphones Jack ( ) (Ø3.5, 16Ω)
- ⑤ Volume Control (VOLUME)
- ⑥ Fast Forward/Direction Button (FF·DIR)
- ⑦ Rewind/Repeat Button (REW·REPEAT)
- ⑧ Open Switch (OPEN)
- ⑨ DC Input Jack (DC IN 1.5 V mini jack)
  - Optional AC adaptor, RPAC1Z
  - For UK, use optional AC adaptor RPAC1ZE.
- ⑩ Rechargeable Battery Cover
- ⑪ \*Dolby Noise Reduction Switch (DOLBY NR)
- ⑫ Tape Selector (TAPE)
- ⑬ Hold Switch (HOLD)
  - This only works for ⑥ and ⑦ buttons.

\*Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.  
 "DOLBY" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.



## POWER SOURCE

### ■ Rechargeable Battery Operation

For its initial use after purchasing or its use after a long time interval (more than three months), make sure to recharge the Rechargeable Battery. Normally 2 hours recharging makes the approximately 3.8 hours tape playback possible.

#### ● Recharging the Rechargeable Battery (Refer to [B].)

1. Insert the Rechargeable Battery into the Charger, making sure that the proper polarity is maintained.
2. Plug the Charger into your household AC power outlet.
3. Disconnect the Charger in about 2 hours.

#### ● Inserting the recharged Rechargeable Battery into the unit.

(Refer to [C].)

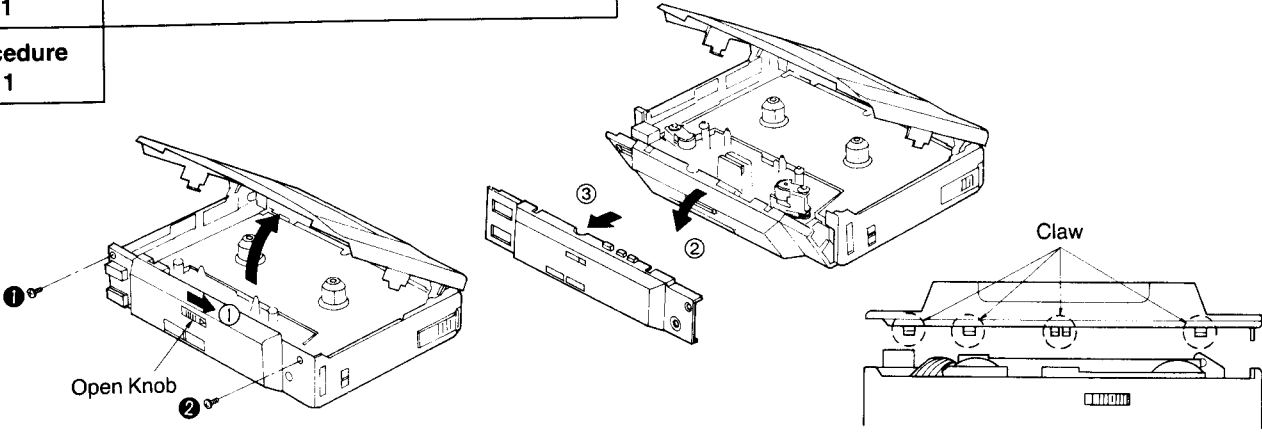
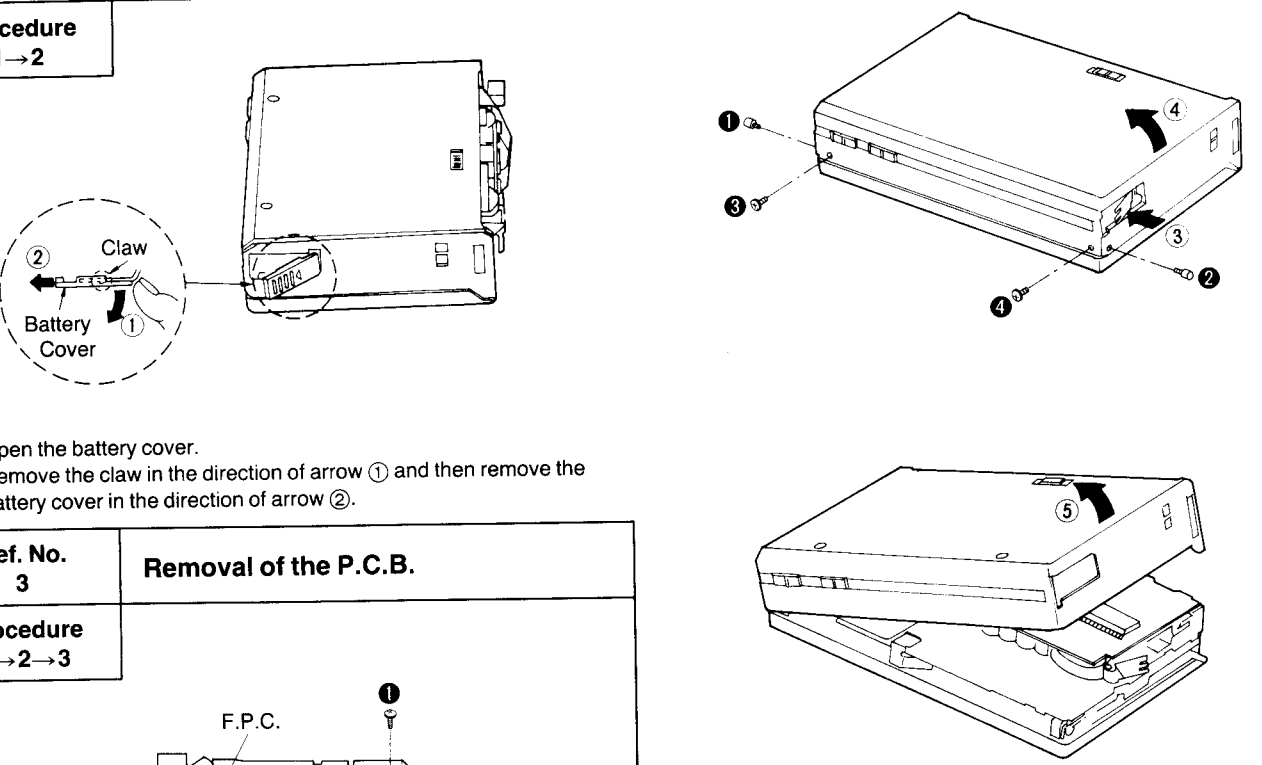
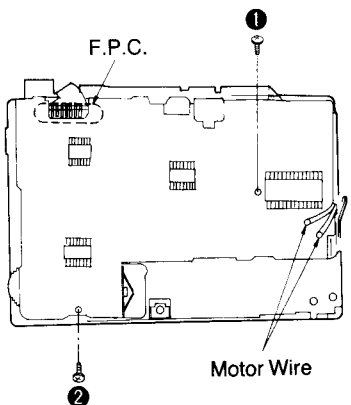
### ■ Optional Battery Operation (Refer to [D].)

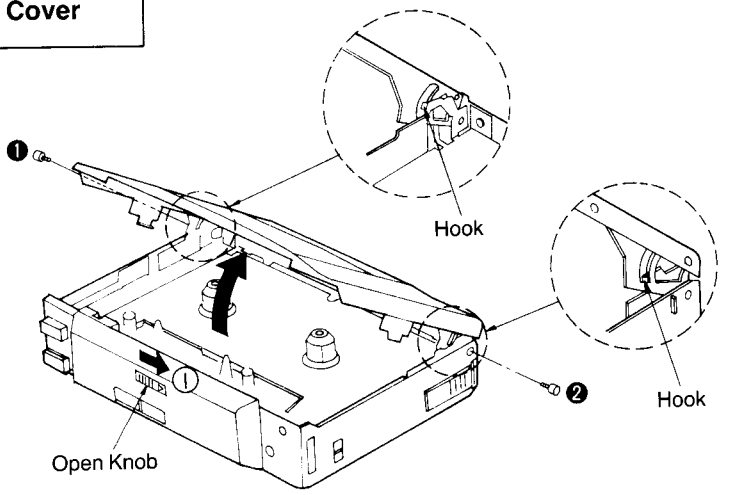
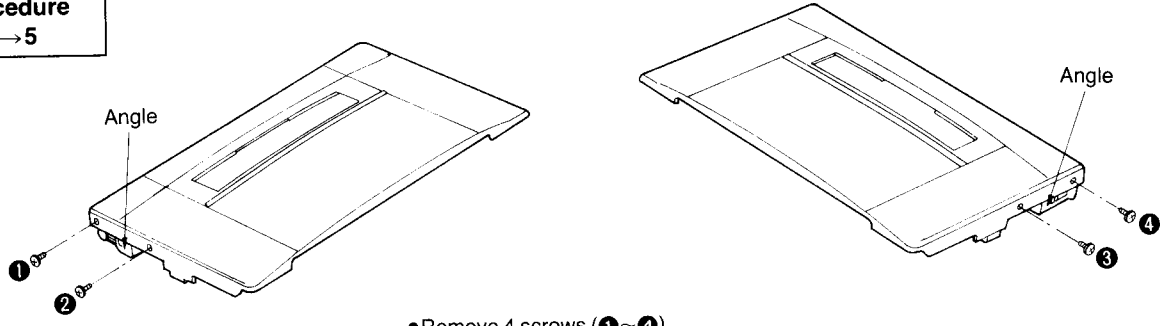
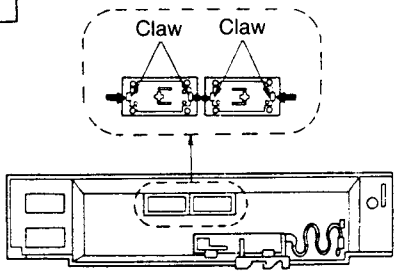
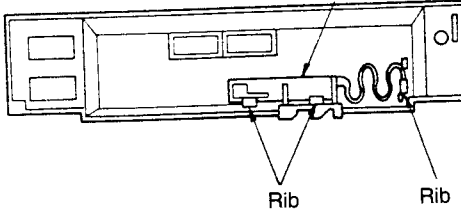
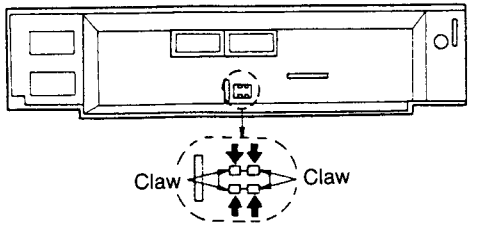
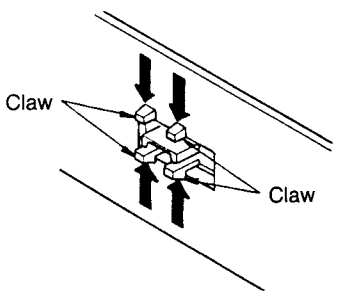
Insert a R6/LR6 battery (Panasonic UM-3 or equivalent, not included) into the Battery Case (included), then attach it to the unit. Make sure that the proper polarity is maintained.

#### ● How to attach the battery case to the unit.

(Refer to [D].)

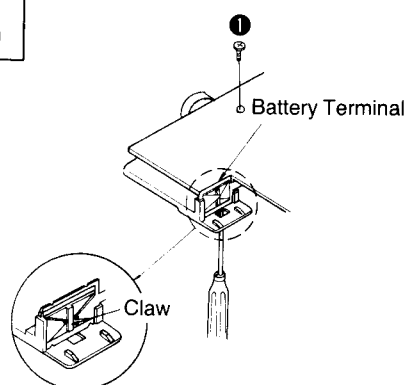
# DISASSEMBLY INSTRUCTIONS

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ref. No.</b><br>1      | <b>Removal of the Side Cabinet</b>                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Procedure</b><br>1     |  <ol style="list-style-type: none"> <li>1. Remove 2 screws (①, ②).</li> <li>2. Slide the open knob in the direction of arrow ① and then open the cassette cover.</li> <li>3. Remove the side cabinet in the direction of arrows (②, ③).</li> </ol>                                                                                                                          |
| <b>Ref. No.</b><br>2      | <b>Removal of the Rear Cabinet</b>                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Procedure</b><br>1→2   |  <ol style="list-style-type: none"> <li>1. Open the battery cover.</li> <li>2. Remove the claw in the direction of arrow ① and then remove the battery cover in the direction of arrow ②.</li> <li>3. Remove 4 screws (①~④).</li> <li>4. Push the battery terminal in the direction of arrow ③ and then remove the rear cabinet in the direction of arrow ④, ⑤.</li> </ol> |
| <b>Ref. No.</b><br>3      | <b>Removal of the P.C.B.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Procedure</b><br>1→2→3 |  <ol style="list-style-type: none"> <li>1. Remove solder from F.P.C. and motor wire.</li> <li>2. Remove 2 screws (①, ②).</li> </ol>                                                                                                                                                                                                                                        |

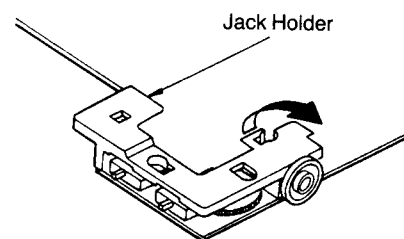
|                           |                                                                                                                                                                                                                                                                                           |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ref. No.</b><br>4      | <b>Removal of the Cassette Cover</b>                                                                                                                                                                                                                                                      |
| <b>Procedure</b><br>4     |  <ol style="list-style-type: none"> <li>1. Remove 2 screws (①, ②).</li> <li>2. Slide the open knob in the direction of arrow ① and then open the cassette cover.</li> <li>3. Remove 2 hook.</li> </ol> |
| <b>Ref. No.</b><br>5      | <b>Removal of the Angle</b>                                                                                                                                                                                                                                                               |
| <b>Procedure</b><br>4→5   |  <p>•Remove 4 screws (①~④).</p>                                                                                                                                                                       |
| <b>Ref. No.</b><br>6      | <b>Removal of the FF button and REW button</b>                                                                                                                                                                                                                                            |
| <b>Procedure</b><br>1→6   |  <p>•Remove 4 claws in the direction of arrows.</p>                                                                                                                                                  |
| <b>Ref. No.</b><br>7      | <b>Removal of the Open Lever</b>                                                                                                                                                                                                                                                          |
| <b>Procedure</b><br>1→7   |  <p>•Remove 3 ribs.</p>                                                                                                                                                                              |
| <b>Ref. No.</b><br>8      | <b>Removal of the Open Knob</b>                                                                                                                                                                                                                                                           |
| <b>Procedure</b><br>1→7→8 |  <p>•Remove 4 claws in the direction of arrows.</p>                                                                                                                                                  |
| <b>Ref. No.</b><br>9      | <b>Removal of the Dolby, Tape Select, XBS Knobs</b>                                                                                                                                                                                                                                       |
| <b>Procedure</b><br>1→2→9 |  <p>•Remove 4 claws in the direction of arrows.</p>                                                                                                                                                  |

|                |                            |
|----------------|----------------------------|
| Ref. No.<br>10 | Removal of the Jack Holder |
|----------------|----------------------------|

Procedure  
1→2→3→10

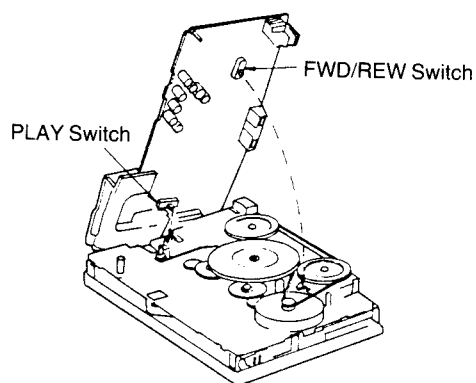


1. Remove the screw (1).
2. Release the claw.



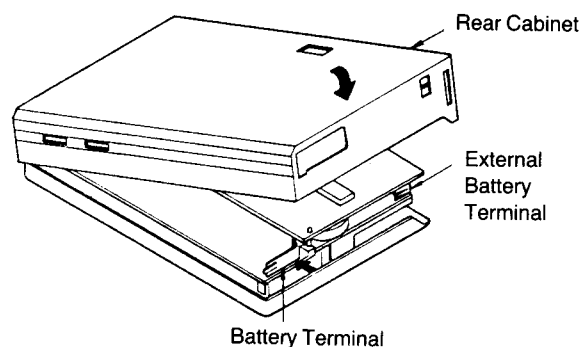
3. Remove the jack holder in the direction of arrow.

### ■ HOW TO REPLACE THE P.C.B.



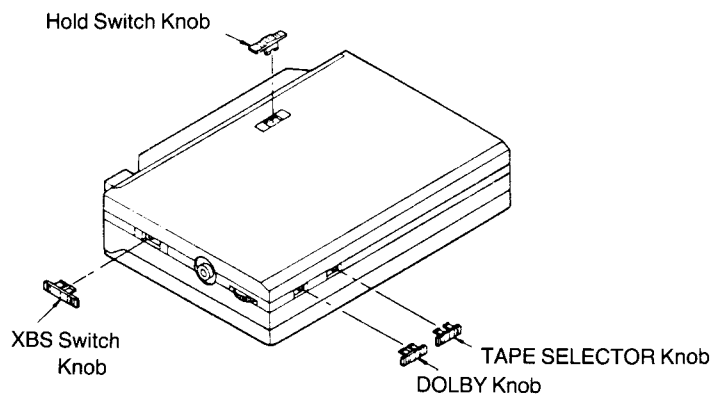
Place the P.C.B. so that the switches on it engage with the mechanism.

### ■ HOW TO REPLACE THE REAR CABINET

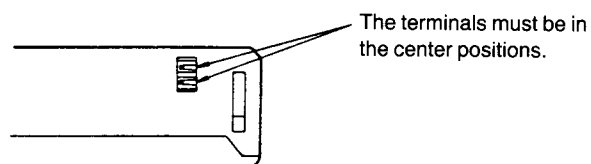


Push the battery terminal and then place the rear cabinet.

### ■ HOW TO REPLACE THE SWITCH KNOB



Place 4 knobs so that it engages with its switches.

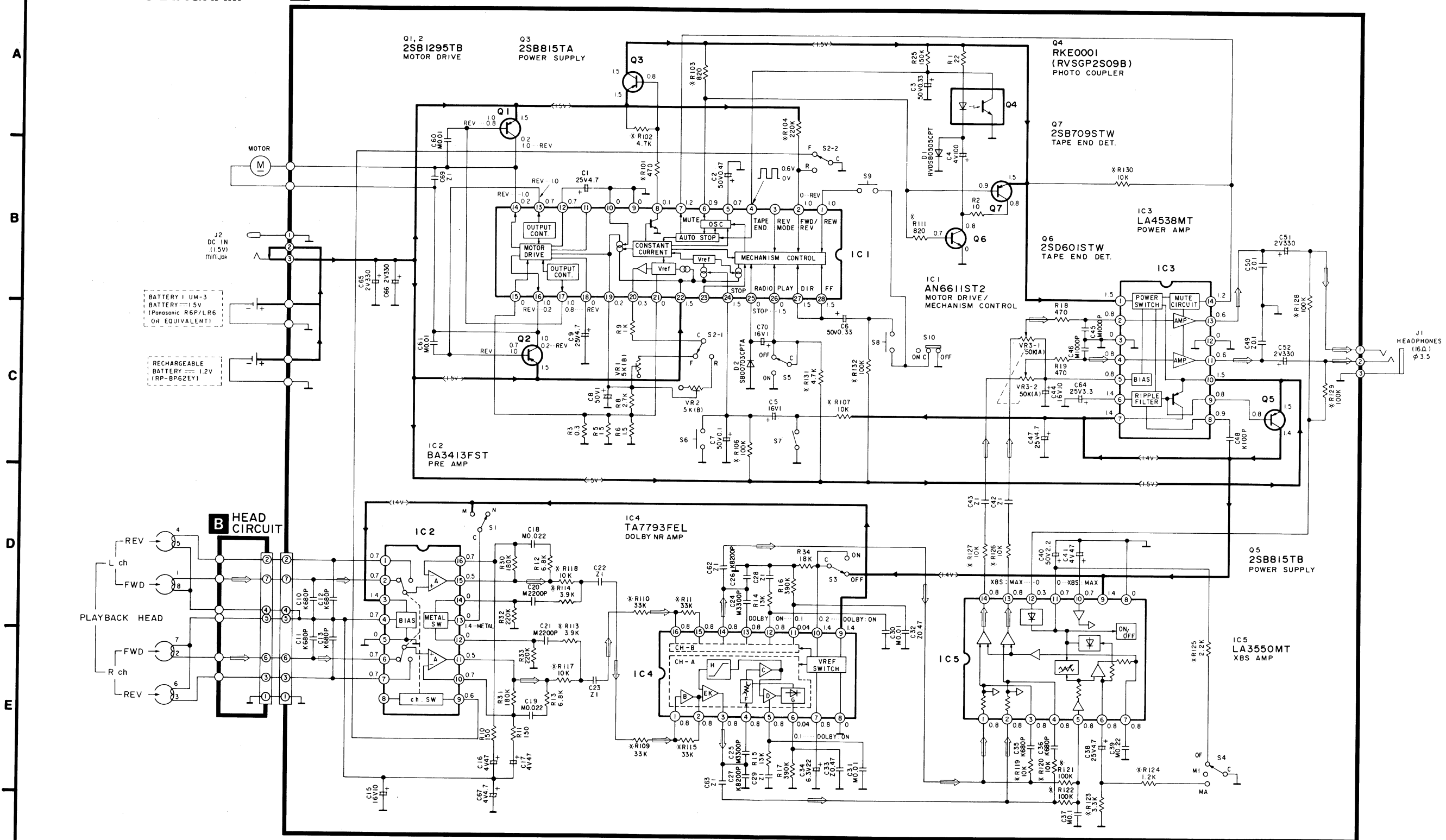


The terminals must be in the center positions.

## SCHEMATIC DIAGRAM, CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM

## ●SCHEMATIC DIAGRAM

## A MAIN CIRCUIT



## Notes:

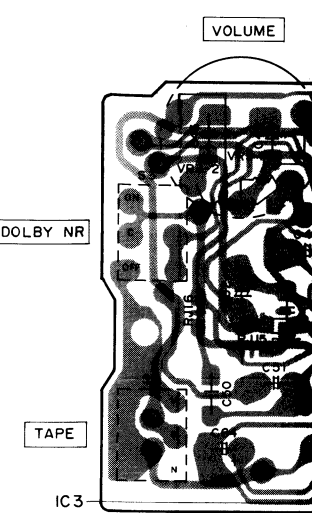
- S1 : Tape select switch in "NORMAL" position. (N...NORMAL, M...METAL/CrO<sub>2</sub>)
- S2-1, S2-2 : FWD/REV switch in "FWD" position. (F...FWD, R...REV)
- S3 : Dolby NR switch in "OFF" position.
- S4 : XBS switch in "OFF" position. (OF...OFF, MI...MID, MA...MAX)
- S5 : Playback switch in "OFF" position.
- S6 : Stop switch.
- S7 : Stop detect switch.
- S8 : FF/Direction switch.
- S9 : REW/Repeat switch.
- S10 : Hold switch.
- VR1 : Tape speed adjustment VR (FWD).
- VR2 : Tape speed adjustment VR (REV).
- VR3-1, VR3-2 : Volume control VR.

- Battery current ..... 165 mA (Vol. min)  
185 mA (Vol. max)  
(Measurement instruction: 315 Hz, 0 dB Playback)
- DC voltage measurements are taken with electronic voltmeter.  
The negative terminal of the provides negative meter connection point.  
No mark...Playback (FWD)
- \*...Printed resistor

●This schematic diagram may be modified at any time with the development of new technology.

→...PLAYBACK SIGNAL LINE →...+B LINE

## ●CIRCUIT



## Notes:

- The circuit sh
- The circuit sh
- The symbols
- The circuit sh

10

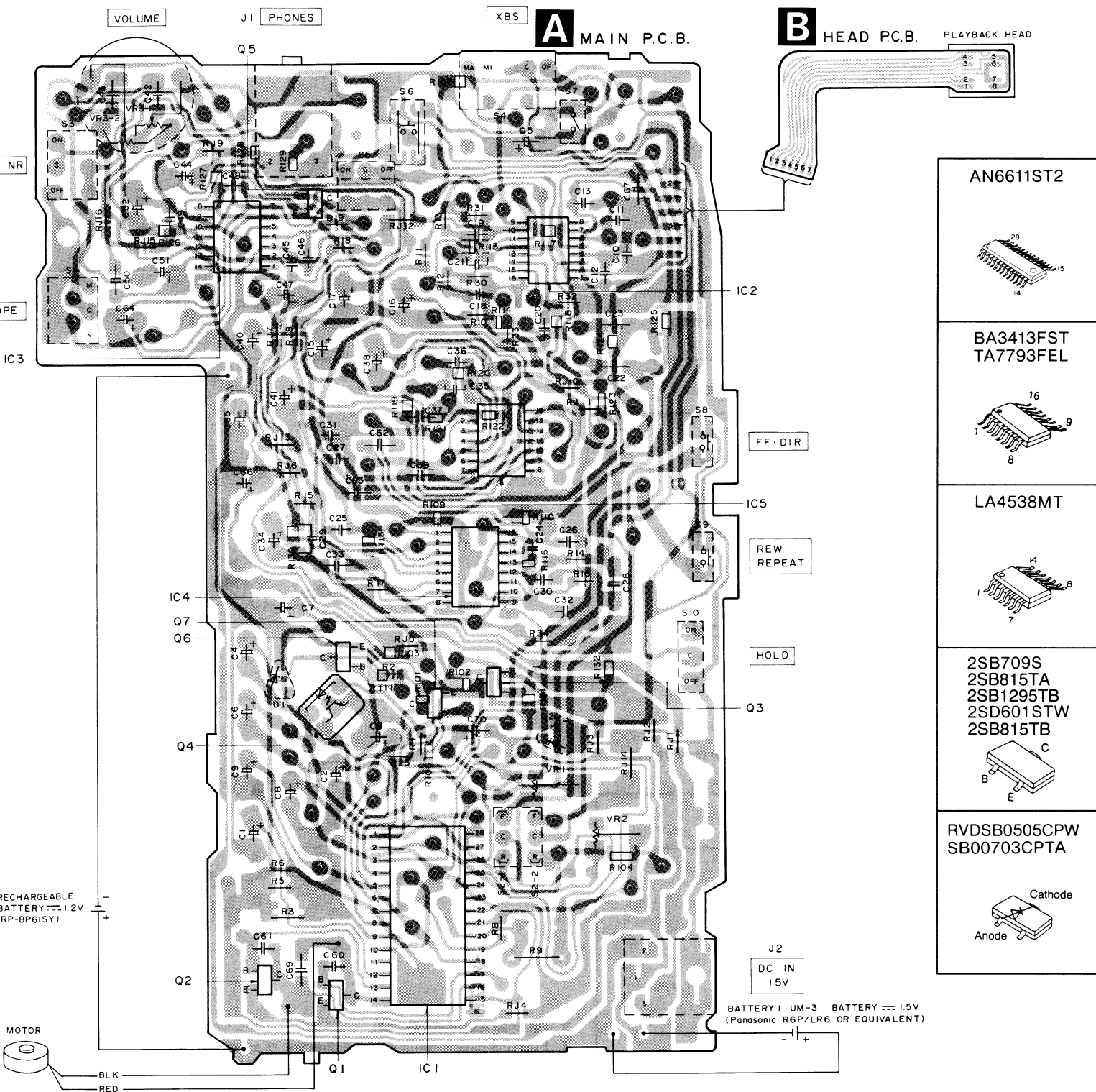
11

12

13

14

# **•CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM**



10

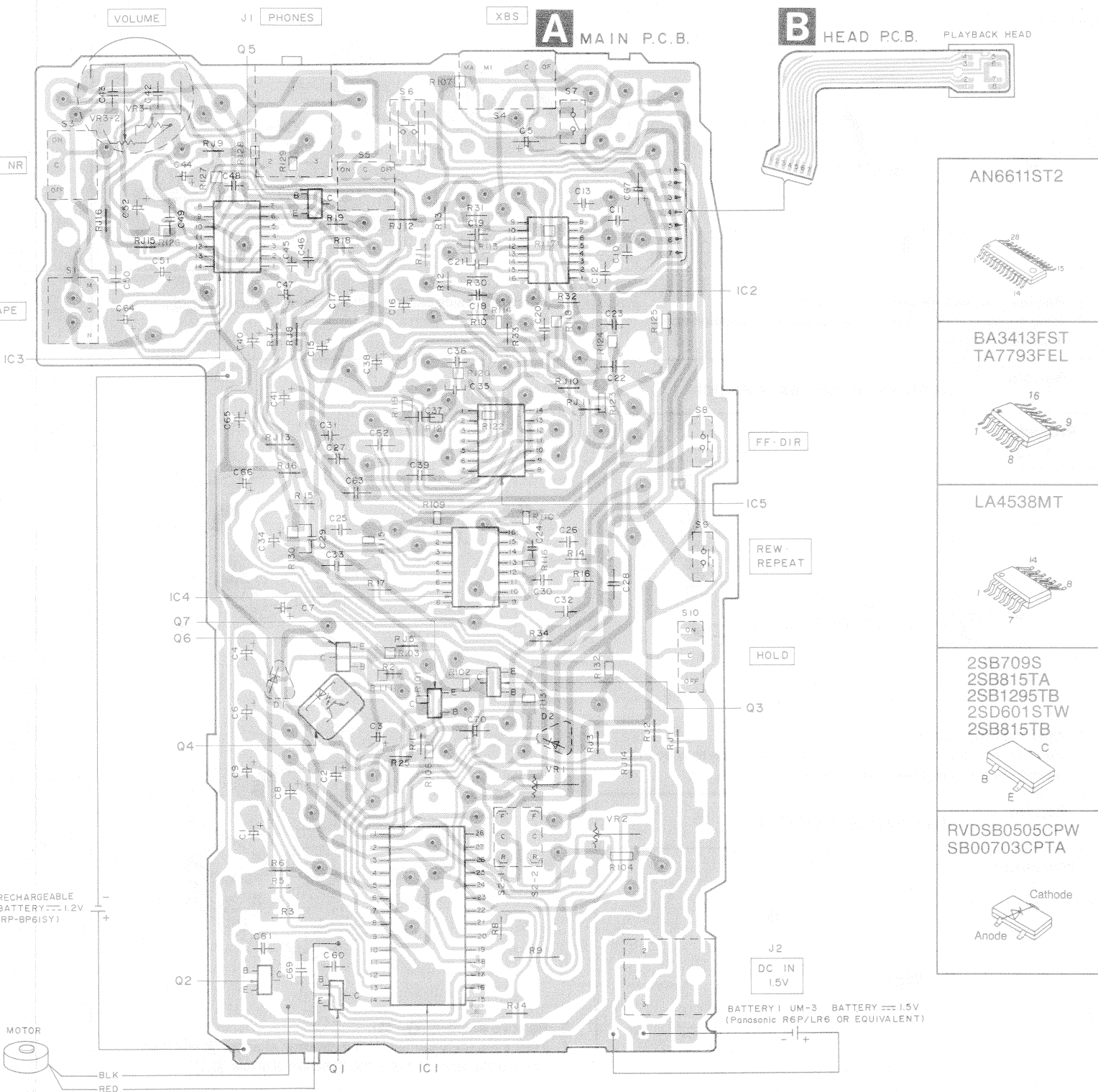
11

12

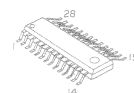
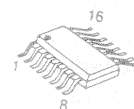
13

14

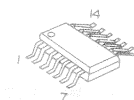
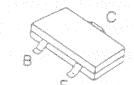
# **•CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM**



AN6611ST2

BA3413FST  
TA7793FEL

LA4538MT

2SB709S  
2SB815TA  
2SB1295TB  
2SD601STW  
2SB815TBRVDSB0505CPW  
SB00703CPTA

# MEASUREMENT AND ADJUSTMENTS

## ADJUSTMENT INSTRUCTION

### READ CAREFULLY BEFORE ATTEMPTING ADJUSTMENT

- |                                    |                                         |
|------------------------------------|-----------------------------------------|
| 1. Set volume control to maximum.  | 5. Set tape selector switch to normal.  |
| 2. Set Dolby NR switch to OFF.     | 6. Set power source voltage to 1.5V DC. |
| 3. Set hold switch to OFF.         |                                         |
| 4. Set XBS selector switch to OFF. |                                         |

| ITEM       | TEST TAPE                | MEASUREMENT POINT                             | ADJUSTMENT POINT                                    | PROCEDURE                                                                                                                                                      |
|------------|--------------------------|-----------------------------------------------|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tape speed | QZZCWAT<br>(3kHz, -10dB) | Headphones jack<br>(16Ω)<br>(Refer to Fig. 1) | VR1...Forward<br>VR2...Reverse<br>(Refer to Fig. 2) | Playback the central part of the tape and adjust VR1 and VR2 so that the tape speed is as follows.<br>Forward: $3,000 \pm 20$ Hz<br>Reverse: $3,000 \pm 20$ Hz |

## ADJUSTMENT POINT

\* Please refer to the Circuit Boards and Wiring Connection Diagram for test point locations

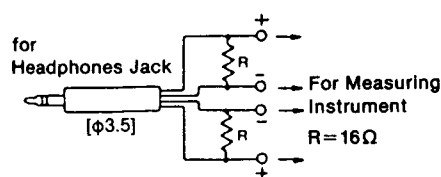


Fig. 1

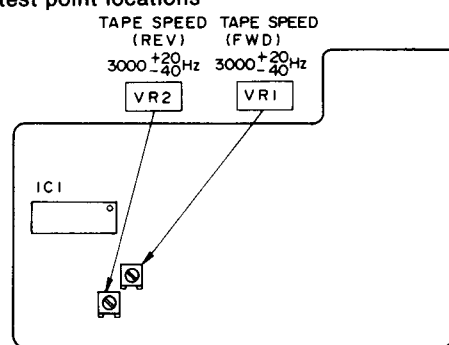


Fig. 2

## Tape Pass Control

This unit uses the TPC system making the head azimuth adjustment unnecessary.

### TPC System Outline

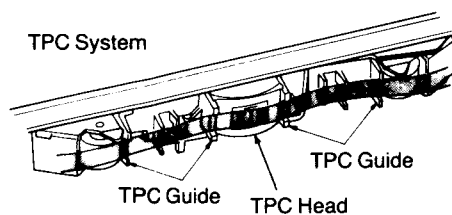


Fig. 3

The TPC guides on both sides of the head and on one side of the pinch rollers are installed in such a way (see Fig. 3) that the tape will run evenly and along the headgap at the right angle. The head azimuth adjustment is therefore unnecessary; there are no head azimuth adjustment screws. The TPC guides on one side of the pinch rollers also control the disturbance caused by the tape width and speed in the forward and reverse mode.

## How to check the operation of the Mechanism

1. Remove the P.C.B. as shown in "How to remove the Main P.C.B." and then remove the Mechanism Assembly.

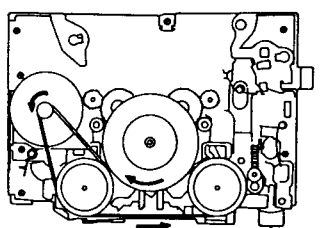


Fig. 4 PLAY button

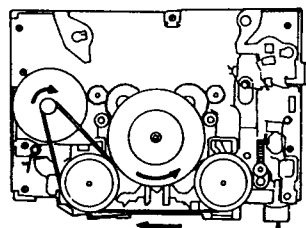


Fig. 5 PLAY button

2. In the stop mode, connect the motor lead with the red covering to the plus (+) voltage and the motor lead with the black covering to the minus (-) voltage of the 1.2V power supply. The "rewind" mode will be set on the unit. In this mode, press the PLAY button to check if the mode is changed to reverse playback.
3. In the stop mode, connect the motor lead with the red covering to the minus (-) voltage and the motor lead with the black covering to the plus (+) voltage of the 1.2V power supply. The fast forward mode will be set on the unit. In this mode, press the PLAY button to check if the mode is changed to forward playback.

## TERMINAL FUNCTION OF IC (IC1: AN6611ST2)

| Terminal No. | Terminal name        | In/Out | Description                                                                                                                                                                                                                                                                                                                             |
|--------------|----------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1            | REW                  | Input  | REW/REPEAT switch (S9) input terminal (at the time of "ON": Low).                                                                                                                                                                                                                                                                       |
| 2            | FWD/REV              | Input  | FWD/REV switch (S2) input terminal (at the time of "REV": Low).                                                                                                                                                                                                                                                                         |
| 3            | REV MODE             | Input  | Reverse mode detection terminal.<br>Not used in this unit.                                                                                                                                                                                                                                                                              |
| 4            | TAPE END             | Input  | Tape turning detection terminal<br>The pulse signal from transistor (Q4) is input to this terminal in accordance with the turning/not turning condition of the tape.<br>With pulse signal: Tape turning.<br>No pulse signal: Tape stopped (end of tape) and subsequent mode is set (stop, reverse play, etc) according to current mode. |
| 5            | C                    | —      | External condenser terminal for internal oscillator circuit.<br>$f=270\text{Hz}$                                                                                                                                                                                                                                                        |
| 6            | OSC                  | Output | Oscillator output terminal.                                                                                                                                                                                                                                                                                                             |
| 7            | MUTE                 | Output | A Low level signal is output from this terminal at the beginning of tape movement and during FF/REW.<br>Power IC (IC5) will take on the muting status.                                                                                                                                                                                  |
| 8            | RLTE                 | Output | Regulate signal output terminal.                                                                                                                                                                                                                                                                                                        |
| 9            | GND                  | —      | Ground terminal.                                                                                                                                                                                                                                                                                                                        |
| 10           | FF/REW               | —      | FF/REW speed control terminal.<br>Connect to ground.                                                                                                                                                                                                                                                                                    |
| 11           | FWD/REV              | —      | FWD/REV speed correction terminal.<br>Not used in this unit.                                                                                                                                                                                                                                                                            |
| 12           | PHAS 1               | —      | External condenser terminal for motor phase correction at the reverse mode.                                                                                                                                                                                                                                                             |
| 13           | OUTPUT 1             | Output | Motor turning stabilized signal output terminal for reverse mode.                                                                                                                                                                                                                                                                       |
| 14           | DRIVE 1              | Output | Motor drive current output terminal for reverse mode.                                                                                                                                                                                                                                                                                   |
| 15           | LOAD                 | —      | Motor rotation control terminal with load of motor.                                                                                                                                                                                                                                                                                     |
| 16           | DRIVE 2              | Output | Motor drive current output terminal for forward mode.                                                                                                                                                                                                                                                                                   |
| 17           | OUTPUT 2             | Output | Motor turning stabilized signal output terminal for forward mode.                                                                                                                                                                                                                                                                       |
| 18           | PHAS 2               | —      | External condenser terminal for motor phase correction at the forward mode.                                                                                                                                                                                                                                                             |
| 19           | SPEED                | Input  | Tape speed control terminal.                                                                                                                                                                                                                                                                                                            |
| 20           | $V_{\text{REF}} (+)$ | —      | Reference voltage control resistor terminal for motor drive.                                                                                                                                                                                                                                                                            |
| 21           | $V_{\text{REF}} (-)$ |        |                                                                                                                                                                                                                                                                                                                                         |
| 22           | $V_{\text{DD}}$      | Input  | Power supply terminal. (+1.5V)                                                                                                                                                                                                                                                                                                          |
| 23           | FAT                  | Input  | Fast signal input terminal.<br>Not used in this unit.                                                                                                                                                                                                                                                                                   |
| 24           | STP                  | Input  | Stop switch (S6) input terminal. (at the time of "ON"=Low)                                                                                                                                                                                                                                                                              |
| 25           | RADIO                | Input  | Not used in this unit.                                                                                                                                                                                                                                                                                                                  |
| 26           | PLY                  | Input  | Play switch (S5) input terminal. (at the time of "ON"=Low)                                                                                                                                                                                                                                                                              |
| 27           | DIR                  | Input  | FF/Direction switch (S8) input terminal. (at the time of "ON"=Low)                                                                                                                                                                                                                                                                      |
| 28           | FF                   |        |                                                                                                                                                                                                                                                                                                                                         |

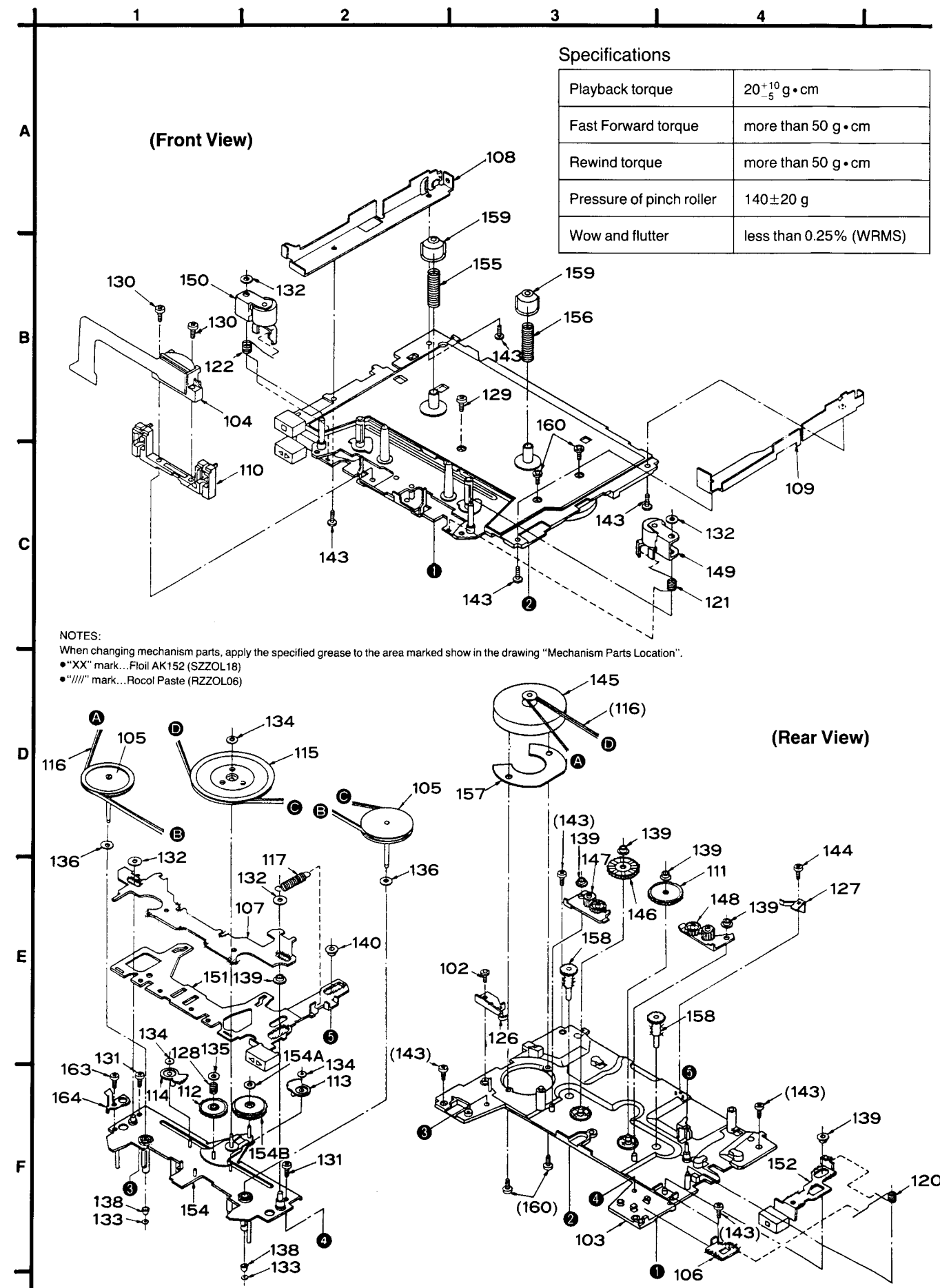
Notes : \* Important safety notice:  
 Components identified by  $\Delta$  mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.  
 \* The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)  
 Parts without these indications can be used for all areas.

| Ref. No. | Part No.     | Part Name & Description | Remarks | Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|----------|--------------|-------------------------|---------|
|          |              | INTEGRATED CIRCUIT(S)   |         |          |              | VARIABLE RESISTOR(S)    |         |
| IC1      | AN6611ST2    | IC, MECHANISM CONTROL   |         | VR1      | RVNEA53B1XF  | V. R, TAPE SPEED (FWD)  |         |
| IC2      | BA3413FST    | IC, PRE AMP             |         | VR2      | RVNEA53B1XF  | V. R, TAPE SPEED (REV)  |         |
| IC3      | LA4538MT     | IC, POWER AMP           |         | VR3      | EVUBQAT50A54 | V. R, VOLUME            |         |
| IC4      | TA7793FEL    | IC, DOLBY               |         |          |              | SWITCH(ES)              |         |
| IC5      | LA3550MT     | IC, XBS                 |         |          |              |                         |         |
|          |              | TRANSISTOR(S)           |         | S1       | RSS2B56ZA-A  | SW, TAPE                |         |
| Q1       | 2SB1295TB    | TRANSISTOR              |         | S2       | ESD1132255   | SW, FWD/REV             |         |
| Q2       | 2SB1295TB    | TRANSISTOR              |         | S3       | RSS2B56ZA-A  | SW, DOLBY NR            |         |
| Q3       | 2SB815TA     | TRANSISTOR              |         | S4       | RSS3B32ZA-A  | SW, XBS                 |         |
| Q4       | REK0001      | TRANSISTOR              |         | S5       | ESD1132255   | SW, PLAYBACK            |         |
| Q5       | 2SB815TB     | TRANSISTOR              |         | S6       | RSH1A87ZA-H  | SW, STOP                |         |
| Q6       | 2SD601STW    | TRANSISTOR              |         | S7       | RSH1A001-U   | SW, STOP DETECT         |         |
| Q7       | 2SB709STW    | TRANSISTOR              |         | S8       | RSG0001      | SW, FF                  |         |
|          |              | DIODE(S)                |         | S9       | RSG0001      | SW, REW                 |         |
| D1       | RVDSB0505CPT | DIODE                   |         | S10      | RSS2A61YA-L  | SW, HOLD                |         |
| D2       | SB00703CPTA  | DIODE                   |         |          |              | JACKS                   |         |
|          |              |                         |         | J1       | RJJD3S5ZA-C  | JACK, HEADPHONES        |         |
|          |              |                         |         | J2       | RJB2ZA-C     | JACK, DC IN             |         |

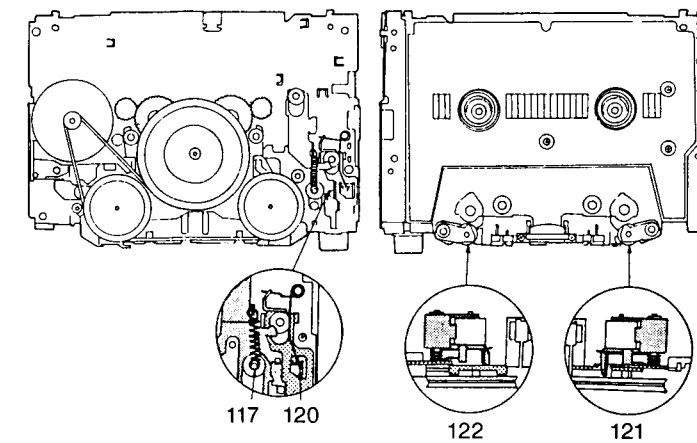
Notes : \* Capacity value are in microfarads ( $\mu$ F) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)  
 \* Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM) , 1M=1,000k (OHM)

| Ref. No. | Part No.      | Values & Remarks | Ref. No. | Part No.     | Values & Remarks |  |  |  |
|----------|---------------|------------------|----------|--------------|------------------|--|--|--|
|          |               | RESISTOR(S)      | C18      | ECUV1E223MBN | 25V 0.022U       |  |  |  |
|          |               |                  | C19      | ECUV1E223MBN | 25V 0.022U       |  |  |  |
|          |               |                  | C20      | ECUV1H222MBN | 50V 2200P        |  |  |  |
| R1       | ERJ6GEYJ220V  | 1/10W 22         | C21      | ECUV1H222MBN | 50V 2200P        |  |  |  |
| R2       | ERJ6GEYJ100V  | 1/10W 10         | C22      | ECUV1C105ZFM | 16V 1U           |  |  |  |
| R3       | RRSL39JR30U   | 0.5W 0.3         | C23      | ECUV1C105ZFM | 16V 1U           |  |  |  |
| R5       | ERJ6GEYK1R5V  | 1/10W 1.5        | C24      | ECUV1H332MBN | 50V 3300P        |  |  |  |
| R6       | ERJ6GEYK1R5V  | 1/10W 1.5        | C25      | ECUV1H332MBN | 50V 3300P        |  |  |  |
| R8       | ERJ6GEYJ272V  | 1/10W 2.7K       | C26      | ECUV1E822KBV | 25V 8200P        |  |  |  |
| R9       | ERSA10J102    | 1/8W 1K          | C27      | ECUV1E822KBV | 25V 8200P        |  |  |  |
| R10      | ERJ6GEYJ151V  | 1/10W 150        | C28      | ECUV1C105ZFM | 16V 1U           |  |  |  |
| R11      | ERJ6GEYJ151V  | 1/10W 150        | C29      | ECUV1C105ZFM | 16V 1U           |  |  |  |
| R12      | ERJ6GEYJ682V  | 1/10W 6.8K       | C30      | ECUV1E103MBN | 25V 0.01U        |  |  |  |
| R13      | ERJ6GEYJ682V  | 1/10W 6.8K       | C31      | ECUV1E103MBN | 25V 0.01U        |  |  |  |
| R14      | ERJ6GEYJ133V  | 1/10W 13K        | C32      | ECUV1C474ZFM | 16V 0.47U        |  |  |  |
| R15      | ERJ6GEYJ133V  | 1/10W 13K        | C33      | ECUV1C474ZFM | 16V 0.47U        |  |  |  |
| R16      | ERJ6GEYJ394V  | 1/10W 390K       | C34      | ECEA0JKS220L | 6.3V 22U         |  |  |  |
| R17      | ERJ6GEYJ394V  | 1/10W 390K       | C35      | ECUV1H681KBN | 50V 680P         |  |  |  |
| R18      | ERJ6GEYJ471V  | 1/10W 470        | C36      | ECUV1H681KBN | 50V 680P         |  |  |  |
| R19      | ERJ6GEYJ471V  | 1/10W 470        | C37      | ECUV1E104MBM | 25V 0.1U         |  |  |  |
| R25      | ERJ6GEYJ154V  | 1/10W 150K       | C38      | ECEA1EKS4R7L | 25V 4.7U         |  |  |  |
| R30      | ERJ6GEYJ184V  | 1/10W 180K       | C39      | ECUV1C224MBM | 16V 0.22U        |  |  |  |
| R31      | ERJ6GEYJ184V  | 1/10W 180K       | C40      | ECEA1HKS2R2L | 50V 2.2U         |  |  |  |
| R32      | ERJ6GEYJ224V  | 1/10W 220K       | C41      | ECEA0GKS470L | 4V 47U           |  |  |  |
| R33      | ERJ6GEYJ224V  | 1/10W 220K       | C42      | ECUV1C105ZFM | 16V 1U           |  |  |  |
| R34      | ERJ6GEYJ183V  | 1/10W 18K        | C43      | ECUV1C105ZFM | 16V 1U           |  |  |  |
|          |               | CHIP JAMPER(S)   | C44      | ECEA1CKS100L | 16V 10U          |  |  |  |
|          |               |                  | C45      | ECUV1H102MBN | 50V 1000P        |  |  |  |
|          |               |                  | C46      | ECUV1H102MBN | 50V 1000P        |  |  |  |
| RJ1-RJ16 | ERJ6GEYOR00V  |                  | C47      | ECEA1EKS4R7L | 25V 4.7U         |  |  |  |
|          |               | CAPACITOR(S)     | C48      | ECUV1H101KN  | 50V 100U         |  |  |  |
|          |               |                  | C49      | ECUV1E104ZFM | 25V 0.1U         |  |  |  |
|          |               |                  | C50      | ECUV1E104ZFM | 25V 0.1U         |  |  |  |
| C1       | ECEA1EKS4R7L  | 25V 4.7U         | C51      | ECEA0DKS331I | 2V 330U          |  |  |  |
| C2       | ECEA1HKS4R7L  | 50V 0.47U        | C52      | ECEA0DKS331I | 2V 330U          |  |  |  |
| C3       | ECEA1HSDR33L  | 50V 0.33U        | C60      | ECUV1E103MBN | 25V 0.01U        |  |  |  |
| C4       | ECEA0GKS101L  | 4V 100U          | C61      | ECUV1E103MBN | 25V 0.01U        |  |  |  |
| C5       | RCSE1CT105LE  | 16V 1U           | C62      | ECUV1C105ZFM | 16V 1U           |  |  |  |
| C6       | ECEA1HKS4R33L | 50V 0.33U        | C63      | ECUV1C105ZFM | 16V 1U           |  |  |  |
| C7       | ECEA1HKS0R1L  | 50V 0.1U         | C64      | ECEA1EKS3R3L | 25V 3.3U         |  |  |  |
| C8       | ECEA1HKS010L  | 50V 0.1U         | C65      | ECEA0DKS331I | 2V 330U          |  |  |  |
| C9       | ECEA1EKS4R7L  | 25V 4.7U         | C66      | ECEA0DKS331I | 2V 330U          |  |  |  |
| C10      | ECUV1H681KBN  | 50V 680P         | C67      | RCSE0GT475LE | 4V 4.7U          |  |  |  |
| C11      | ECUV1H681KBN  | 50V 680P         | C69      | ECUV1C105ZFM | 16V 1U           |  |  |  |
| C12      | ECUV1H681KBN  | 50V 680P         | C70      | RCSE1CT105LE | 16V 1U           |  |  |  |
| C13      | ECUV1H681KBN  | 50V 680P         |          |              |                  |  |  |  |
| C15      | ECEA1CSD100L  | 16V 10U          |          |              |                  |  |  |  |
| C16      | ECEA0GKS470L  | 4V 47U           |          |              |                  |  |  |  |
| C17      | ECEA0GKS470L  | 4V 47U           |          |              |                  |  |  |  |

## MECHANISM PARTS LOCATION

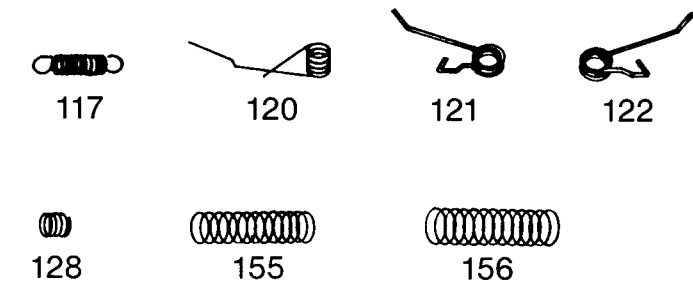


## ■ SPRING LOCATION

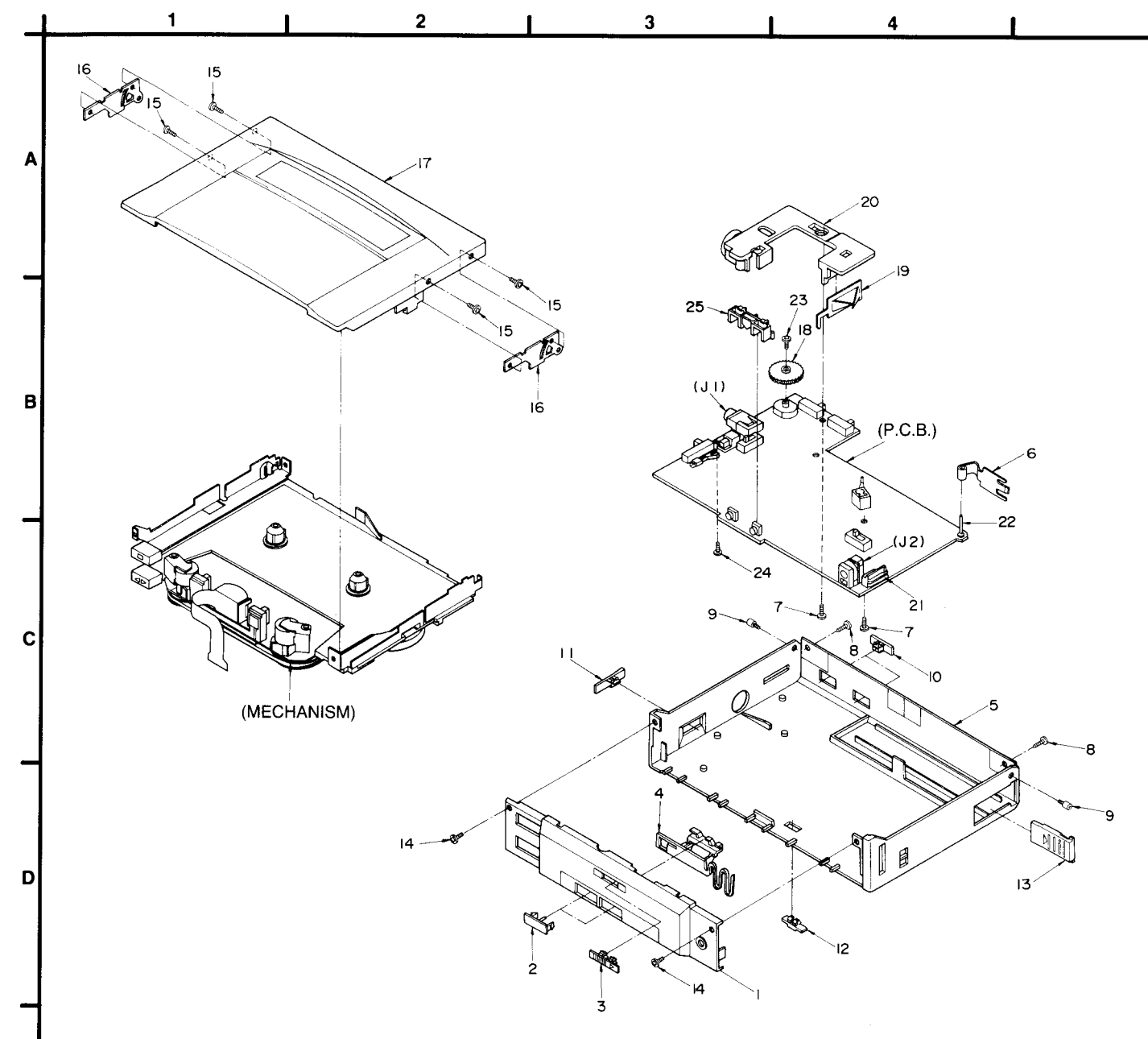


## ■ SPRING ILLUSTRATION

The illustration shows the actual size of the springs so it can be used to check their shapes.  
(The illustration shows the springs separated from the mechanism.)



## CABINET PARTS LOCATION



| Ref. No. | Part No.     | Part Name & Description | Remarks | Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|----------|--------------|-------------------------|---------|
|          |              | CABINET PARTS           |         | 128      | RUQ117ZA     | SPRING                  |         |
|          |              |                         |         | 129      | XQN14+C25FZ  | SCREW                   |         |
| 1        | RGPO002-K    | SIDE CABINET            |         | 130      | XQN14+CM6. 5 | SCREW                   |         |
| 2        | RGU0013-S    | BUTTON, FF/REW          |         | 131      | XQS14+A25FZ  | SCREW                   |         |
| 3        | RGV0007-K    | BUTTON, OPEN            |         | 132      | QBW2126      | WASHER                  |         |
| 4        | RMRO026-K    | LOCK                    |         | 133      | RNW103ZA     | WASHER                  |         |
| 5        | RKFK58YA     | CABINET                 |         | 134      | RNW137ZA     | WASHER                  |         |
| 6        | RJC99002-1   | BATTERY TERMINAL        |         | 135      | RNW142ZA     | WASHER                  |         |
| 7        | RHE5079ZA    | SCREW                   |         | 136      | RNW1520ZA    | WASHER                  |         |
| 8        | RHE5097ZB    | SCREW                   |         | 138      | RHRK547ZA    | SPACER                  |         |
| 9        | RHE5123YB    | SCREW                   |         | 139      | RHR1282ZA    | BUSH                    |         |
| 10       | RGV0004-K    | KNOB, DOLBY/REV MODE    |         | 140      | RHR3376ZA    | BUSH                    |         |
| 11       | RGV0017-K    | KNOB, XBS               |         | 143      | RHE5097ZB    | SCREW                   |         |
| 12       | RBD547ZA-0   | KNOB, HOLD              |         | 144      | XQN16+AQ16   | SCREW                   |         |
| 13       | RKX0002-K    | BATTERY COVER           |         | 145      | 1JQAKAR40PZD | MOTOR ASS' Y            |         |
| 14       | RHQ0002-Z    | SCREW                   |         | 146      | 1NGAKAR40RZA | GEAR ASS' Y             |         |
| 15       | RHE5097ZB    | SCREW                   |         | 147      | 1NLAKAR40RZA | LEVER ASS' Y            |         |
| 16       | RMA0009      | ANGLE                   |         | 148      | 2NLAKAR40RZA | LEVER ASS' Y            |         |
| 17       | RFKLQP303E   | CASSETTE COVER ASS' Y   |         | 149      | 1NLAKAR40PZA | PINCH ROLLER ASS' Y     |         |
| 18       | RGW0005-K    | KNOB, VOLUME            |         | 150      | 2NLAKAR40PZA | PINCH ROLLER ASS' Y     |         |
| 19       | RJC99016ZB   | BATTERY TERMINAL        |         | 151      | 1NRAKAR40PZA | ROD ASS' Y              |         |
| 20       | RMN0007-K    | CHASSIS                 |         | 152      | 2NRAKAR40RZA | ROD ASS' Y              |         |
| 21       | RJT911ZA     | JOINT TERMINAL          |         | 154      | 3UAAKAR40PZA | MAIN CHASSIS ASS' Y     |         |
| 22       | RDF3147ZA    | BATTERY SHAFT           |         | 154A     | RNW137ZA     | WASHER                  |         |
| 23       | XSHR17+2FZ   | SCREW                   |         | 154B     | 2NGAKAR40RZB | GEAR ASS' Y             |         |
| 24       | RHE5079ZA    | SCREW                   |         | 155      | RUQ120ZA     | SPRING                  |         |
| 25       | RMN0006      | HOLDER                  |         | 156      | RUQ121ZA     | SPRING                  |         |
|          |              | MECHANISM PARTS         |         | 157      | RMCI229ZB    | SHIELD PLATE            |         |
|          |              |                         |         | 158      | RNG139ZA     | GEAR                    |         |
| 102      | XQN14+CQ25FZ | SCREW                   |         | 159      | RDM25ZA      | REEL TABLE              |         |
| 103      | RFU188ZA     | SUB CHASSIS             |         | 160      | XQN17+A18FZ  | SCREW                   |         |
| 104      | 1JHD036ZAM   | P. B HEAD               |         | 164      | RHE5080ZA    | SCREW                   |         |
| 105      | 2DWAKAR40RZA | FLYWHEEL ASS' Y         |         | 163      | RUS775ZA     | SPRING                  |         |
| 106      | RNR82ZA      | ROD                     |         |          |              | PACKING MATERIAL        |         |
| 107      | RNR84ZB      | ROD                     |         |          |              |                         |         |
| 108      | RMA0010-1    | PLATE                   |         | P1       | RPKK1150ZA   | CASE                    |         |
| 109      | RMA0011-1    | PLATE                   |         | P2       | RPKK1151ZA   | SLEEVE                  |         |
| 110      | RFU190ZA     | HEAD HOLDER             |         | P3       | RPN0049      | CUSHION                 |         |
| 111      | RNG140ZA     | GEAR                    |         | P4       | RPH647ZA     | PAD                     |         |
| 112      | RNG145ZB     | GEAR                    |         |          |              | ACCESSORIES             |         |
| 113      | RNG146ZA     | GEAR                    |         |          |              |                         |         |
| 114      | RNG147ZA     | GEAR                    |         | A1       | RQXK4134ZA   | INSTRUCTION MANUAL      |         |
| 115      | RDR147ZB     | WHEEL                   |         | A2       | RP-BC155EY-0 | BATTERY CHAGER          | (E) △   |
| 116      | RDV112ZA     | BELT                    |         | A2       | RP-BC155EY0  | BATTERY CHAGER          | (EB) △  |
| 117      | RUD127ZB     | SPRING                  |         | A3       | RP-BP62EY    | RECHARGEABLE BATTERY    |         |
| 120      | RUW201ZA     | SPRING                  |         | A4       | RP-BA305SYAO | BATTRY CASE             |         |
| 121      | RUW202ZA     | SPRING                  |         | A5       | RP-HV135SY-0 | HEAD PHONS              |         |
| 122      | RUW203ZA     | SPRING                  |         |          |              |                         |         |
| 126      | RUS772ZA     | SPRING                  |         |          |              |                         |         |
| 127      | RUS776ZA     | SPRING                  |         |          |              |                         |         |